

J. Akiyama
U.S. Serial No. 09/992,362
Page 2 of 10

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): A method for recording and reproducing information with respect to a recording medium, the recording medium including a data recording region which is defined to record information in a first format, and an encryption data recording region in which encryption information required to reproduce information recorded in the data recording region is recorded in a second format, the first format and the second format differing from each other in at least one of recording density, error correcting system, and defect management system, said method comprising the sequential steps of:

encrypting the information using the encryption information which was reproduced in the second format from the encryption data recording region in the recording medium;

recording information in the data recording region in the first format which differs from the second format in an identical kind of recording system as the encryption data recording region, wherein the recording system is a rewritable recording system; and

reproducing information by reading out the encrypted information recorded in the data recording region in the first format, and by decrypting the encrypted information using the encryption information which was reproduced from the encryption data recording region in the recording medium in the second format,

wherein the encryption information is different for different disks, such that the encryption information recorded on each disk is different.

Claim 2 (currently amended): A recording medium comprising:

a data recording region and an encryption data recording region in which information is recorded in an identical kind of recording system, wherein:

the recording system is a rewritable recording system;

J. Akiyama
U.S. Serial No. 09/992,362
Page 3 of 10

the data recording region of the recording medium is defined to record information in a first format; and

the encryption data recording region of the recording medium records encryption information in a second format which differs from the first format, the first format and the second format differing from each other in at least one of recording density, error correcting system, and defect management system,

wherein the encryption information is different for different disks, such that the encryption information recorded on each disk is different.

Claim 3 (original): The recording medium according to claim 2, wherein the data recording region is blank before information is recorded by user.

Claim 4 (previously presented): The recording medium according to claim 2, wherein the second format reproduces information with a better reproduction quality than the first format.

Claim 5 (original): The recording medium according to claim 4, wherein recording density of the second format is lower than that of the first format.

Claim 6 (original): The recording medium according to claim 2, wherein the encryption information is recorded at the plural different positions in a circumferential direction on a disk which makes up the recording medium.

Claim 7 (original): The recording medium according to claim 2, wherein the encryption information is set to be different in each recording medium.

Claim 8 (original): The recording medium according to claim 2, wherein identification information for identifying each recording medium is recorded in the encryption data recording region.

J. Akiyama
U.S. Serial No. 09/992,362
Page 4 of 10

Claim 9 (original): The recording medium according to claim 4, wherein a modulation system of the first format is different from that of the second format.

Claim 10 (canceled)

Claim 11 (currently amended): A recording and reproducing apparatus for recording and reproducing information with respect to a recording medium, the recording medium including a data recording region and an encryption data recording region in which information is recorded in an identical kind of recording system, wherein:

the recording system is a rewritable recording system.

the data recording region of the recording medium is defined to record information in a first format, and

the encryption data recording region of the recording medium records encryption information in a second format which differs from the first format, the first format and the second format differing from each other in at least one of recording density, error correcting system, and defect management system,

said recording and reproducing apparatus comprising:

reproducing means for reproducing information in the first format and the second format;

and

recording means for recording information on the recording medium only in the first format, but not in the second format,

wherein the encryption information is different for different disks, such that the encryption information recorded on each disk is different.

Claim 12 (previously presented): The recording and reproducing apparatus according to claim 11, wherein the second format reproduces information with a better reproduction quality than the first format.

Claim 13 (original): The recording and reproducing apparatus according to claim 12, wherein recording density of the second format is lower than that of the first format.

J. Akiyama
U.S. Serial No. 09/992,362
Page 5 of 10

Claim 14 (original): The recording and reproducing apparatus according to claim 12, wherein a modulation system of the first format is different from that of the second format.

Claim 15 (canceled)

Claim 16 (currently amended): A recording and reproducing apparatus for recording and reproducing information with respect to a recording medium, the recording medium including a data recording region and an encryption data recording region in which information is recorded in an identical kind of recording system, wherein:

the recording system is a rewritable recording system;

the data recording region of the recording medium is defined to record data in m kinds of recording format ($m \geq 1$); and

the encryption data recording region of the recording medium records encryption information required to encrypt information to be recorded in the data recording region and to reproduce recorded information from the data recording region in $n-m$ kinds of recording formats ($(n-m) \geq 1$) which differ from the m kind ($m \geq 1$) of recording formats, the m kinds of formats differing from the n kinds of formats in at least one of recording density, error correcting system, and defect management system,

said recording and reproducing apparatus comprising:

reproducing means for reproducing information recorded in n kinds of formats; and

sole recording means for recording information only in the m ($1 \leq m < n$) kinds of formats of the n kinds of formats,

wherein the encryption information is different for different disks, such that the encryption information recorded on each disk is different.

Claim 17 (withdrawn): A method for manufacturing a recording medium, the recording medium including a data recording region which is defined to record information in a predetermined recording system and a first format, and an encryption data recording region in which encryption information required to encrypt information to be recorded in the data recording region and to

J. Akiyama
U.S. Serial No. 09/992,362
Page 6 of 10

reproduce recorded information from the data recording region is recorded in the recording system and a second format different from the first format,

said method comprising the steps of:

(1) detecting defects by recording and reproducing test data in the data recording region in the first format; and

(2) recording the encryption information in the encryption data recording region in the second format,

said step (1) and said step (2) being continuously carried out in one apparatus.

Claim 18 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein recording density of the second format is lower than that of the first format.

Claim 19 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein the encryption information is recorded at the different plural positions in a circumferential direction on a disk which makes up the recording medium.

Claim 20 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein the encryption information is set to be different in each recording medium.

Claim 21 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein identification information for identifying each recording medium is recorded in the encryption data recording region.

Claim 22 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein a modulation system of the first format is different from that of the second format.

Claim 23 (withdrawn): The method for manufacturing a recording medium according to claim 17, wherein an error correcting system of the first format is different from that of the second format.

J. Akiyama
U.S. Serial No. 09/992,362
Page 7 of 10

Claim 24 (withdrawn): The method for manufacturing a recording medium according to claim

17, further comprising the steps of:

detecting the encryption information which is recorded in the encryption data recording
region in the second format; and

re-recording the encryption information in case where the encryption information has not
been recorded properly.